SHARP

SERVICE MANUAL / SERVICE-ANLEITUNG / MANUEL DE SERVICE

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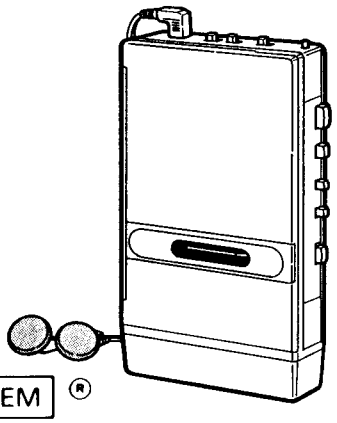

DOLBY SYSTEM ®

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JC-K15G
(BK/R/GY/BL)

USA: (BK/GY/BL)
UK: (BK/R)
Europe: (BK)

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.
- Im Interesse der Benutzer-Sicherheit sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.
- Dans l'intérêt de la sécurité de l'utilisateur, l'appareidevra être reconstitué dans sa condition première et seules des pièces identiques à celles spécifiées, doivent être utilisées.

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SHARP CORPORATION

SHARP ELECTRONICS CORPORATION

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FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

General

Power source:	DC 1.5V (UM/SUM-3 or R6 x 1 or external DC 1.5V)
Output power:	Max; 18mW (9 mW + 9mW) (DC operation) RMS; 10mW (5mW + 5mW) (DC operation, 10% distortion)
Dimensions: (with battery case)	Width; 72.8 mm (2-7/8") Height; 121.8 mm (4-3/4") Depth; 23.5 mm (15/16")
Weight;	215 g (7.58 oz.) with battery and battery case

Tape deck

Tape:	Compact cassette tape
Frequency response:	40 - 16,000 Hz (Metal/CrO_2 tape) 40 - 14,000 Hz (Normal tape)
Singal/noise ratio:	Dolby NR off; 54 dB Dolby NR effect; 10 dB

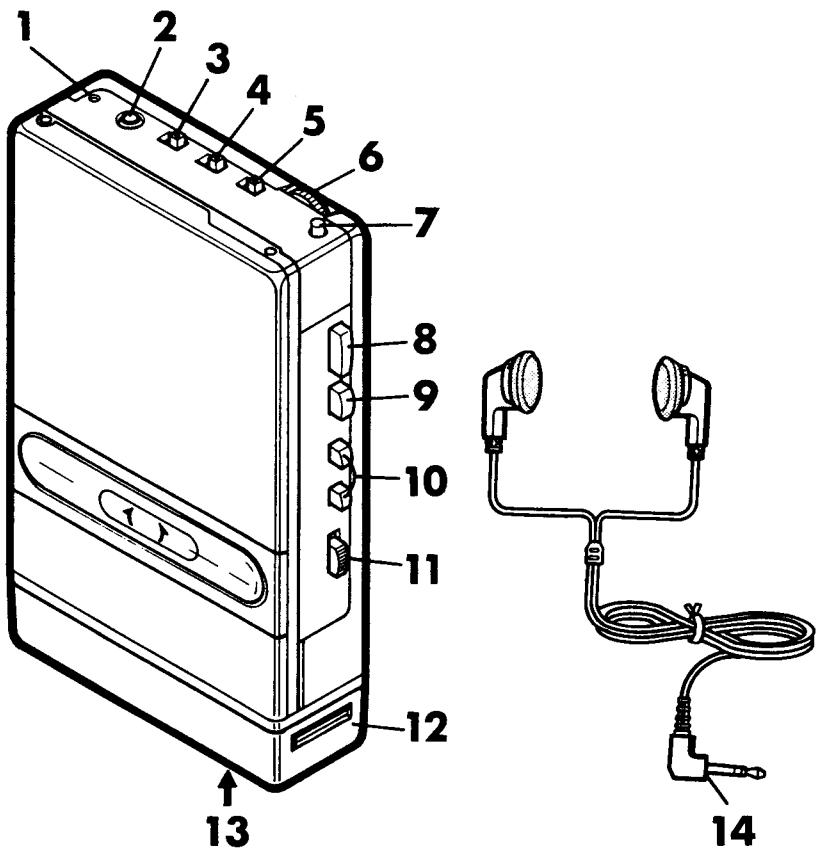
Headphones

Type:	Inner-ear
Impedance:	16 ohms

Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

1. Power Indicator
2. Headphones Socket
3. Bass Boost Switch
4. Tape Selector Switch
5. Dolby NR Switch
6. Volume Control
7. Tape Direction Button
8. Play Button
9. Stop/Eject Button
10. Fast Forward/Rewind Buttons
11. Reverse Mode Switch
12. Battery case
13. External DC Power Input Socket
14. Headphones



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EINE VOLLSTÄNDIGE BESCHREIBUNG DER BEDIENUNG DIESES GERÄTES IST IN DER BEDIENUNGSANLEITUNG ENTHALTEN.

TECHNISCHE DATEN

Allgemein

Spannungsversorgung:	1,5V Gleichspannung (UM/SUM-3,HP-7 oder R6 x 1 bzw. 1,5V externe Gleichspannung)
Ausgangsleistung:	Max; 18 mW (9 mW + 9 mW, Gleichspannungsbetrieb) Sinusleistung; 10 mW (5 mW + 5 mW, Gleichspannungsbetrieb, 10% Verzerrung)
Abmessungen: (mit Batteriegehäuse)	Breite; 72,8 mm Höhe; 121,8 mm Tiefe; 23,5 mm
Gewicht:	215 g (mit Batterie und Batteriegehäuse)

Cassettendeck

Band:	Kompaktcassettenband
Frequenzgang:	40 - 16 000 Hz (Reineisen-/CrO_2-Band) 40 - 14 000 Hz (Normalband)
Rauschabstand:	Dolby NR ausgeschaltet; 54 dB Dolby NR-Effekt; 10 dB

Kopfhörer

Typ:	"Inner-ear" (nur zum Einstecken in das Ohr)
Impedanz:	16 Ohm

Die technischen Daten für dieses Modell können ohne vorherige Ankündigung Änderungen unterworfen sein.

BEZEICHNUNG DER TEILE

1. Einschaltanzeige
2. Kopfhörerbuchse
3. Baßanhebungsschalter
4. Bandsortenwahlschalter
5. Dobly-Rauschunterdrückungs-Schalter
6. Lautstärkeregler
7. Bandrichtungswahlschalter
8. Wiedergabetaste
9. Stopp/Auswurf-Taste
10. Schnellvorlauf/Rückspul-Tasten
11. Rücklauf-Betriebsartenschalter
12. Batteriegehäuse
13. Außengleichspannungs-Eingangsbuchse
14. Kopfhörer

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POUR LA DESCRIPTION COMPLÈTE DU FONCTIONNEMENT DE CET APPAREIL, SE REPORTER AU MODE D'EMPLOI.

CARACTÉRISTIQUES

Général

Alimentation:	1,5 V CC (UM/SUM-3, HP-7 ou R6 x 1 ou 1,5 V CC externe)
Puissance de sortie:	Max; 18 mW (9 mW + 9 mW) (Fonctionnement sur CC) RMS; 10 mW (5 mW + 5 mW) (Fonctionnement sur CC, 10% de distorsion)
Dimensions: (avec boîtier de pile)	Largeur; 72,8 mm Hauteur; 121,8 mm Profondeur; 23,5 mm
Poids:	215 g avec pile et boîtier de pile

Platine à cassette

Bande:	Cassette compacte
Réponse en fréquence:	40 - 16.000 Hz (Bande Metal/CrO_2) 40 - 14.000 Hz (Bande normale)
Rapport signal/bruit:	Dolby NR hors circuit; 54 dB Effet Dolby NR; 10 dB

Casque

Type:	Inner-ear (intérieur de l'oreille)
Impédance:	16 ohms

Les caractérestiques de ce modèle sont sujettes à modification sans préavis.

NOMENCLATURE

1. Témoin d'alimentation
2. Prise de casque
3. Commutateur d'amplification des graves
4. Sélecteur de bande
5. Commutateur Dolby NR
6. Commande de volume
7. Touche de sens de défilement
8. Touche de lecture
9. Touche d'arrêt/éjection
10. Touches d'avance rapide/rebobinage
11. Commutateur de mode d'inversion
12. Boîtier de pile
13. Prise d'entrée d'alimentation CC extérieure
14. Casque

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DISASSEMBLY

Caution on Disassembly
Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep its safety and excellent performance:
1. Take cassette tape out of the unit.
2. Take off nylon bands or wire holders where they need be removed when disassembling the unit. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
3. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear cabinet	1. Screw..... (A)x5	4-1,2
2	Front Cabinet	1. Screw..... (B)x2	4-3,4
3	Button Cover	1. Screw..... (C)x1	4-5
4	Main P.W.B.	1. Screw..... (D)x4	4-6

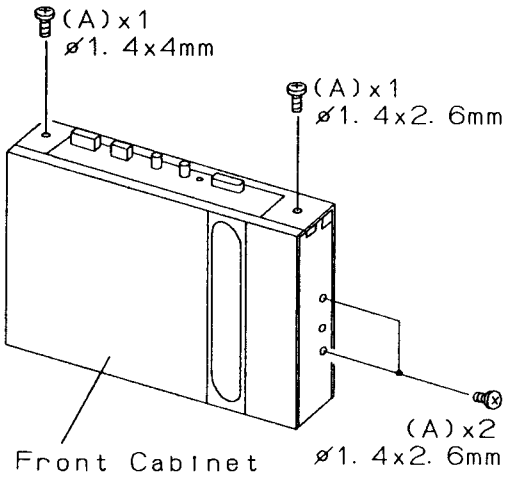

Figure 4-1

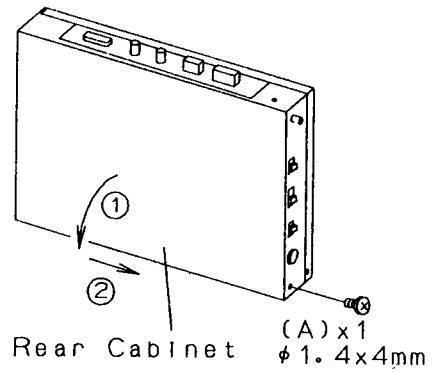

Figure 4-2

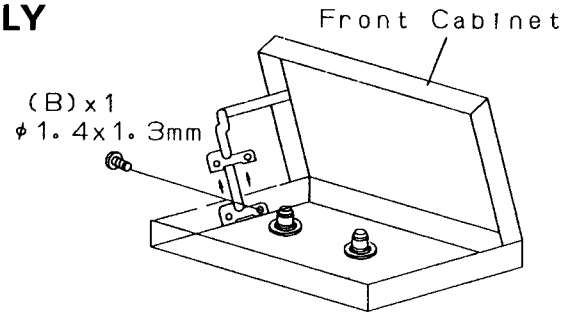

Figure 4-3

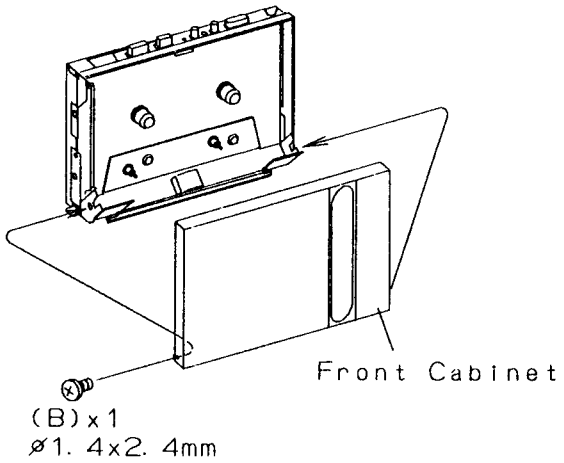

Figure 4-4

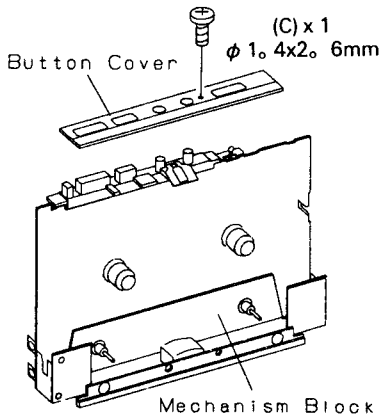

Figure 4-5

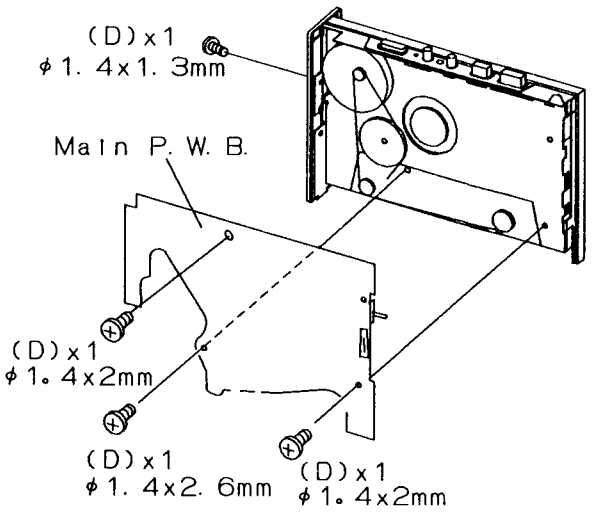

Figure 4-6

Ⓓ ZERLEGEN

Vorsichtsmassregeln für das Zerlegen
Beim Zerlegen und zusammenbauen des Gerätes die folgenden Anweisungen befolgen, um dessen Betriebssicherheit und ausgezeichnete Leistung aufrechtzuerhalten.
1. Die Cassette aus dem Gerät entfernen.
2. Nylonbänder oder Leitungshalter entfernen, falls dies beim Zerlegen des Gerätes erforderlich ist. Nach Warten des Gerätes darauf achten, die Leitungen wieder so zu verlegen, wie sie vor den Zerlegen angeordnet waren.
3. Beim Ausführen von Wartungsarbeiten auf statische Elektrizität der integrierten Schaltkreise und anderen Schaltungen achten.

SCHRITT	ENTFERNEN	VERFAHREN	ABBILDUNG
1	Gehäusehinterteil	1. Schraube ..... (A)x5	4-1,2
2	Vordere Gehäusehälfte	1. Schraube ..... (B)x2	4-3,4
3	Tastenabdeckung	1. Schraube ..... (C)x1	4-5
4	Hauptleiterplatte	1. Schraube ..... (D)x4	4-6

Ⓕ DÉMONTAGE

Précautions pour le démontage
Lors du démontage de l'appareil et de son remontage, suivre les précautions ci-dessous, pour maintenir la sécurité et d'excellentes performances.
1. Déposer la bande cassette de l'appareil.
2. Déposer les bandes de nylon ou les serre-câbles si nécessaire lors du démontage de l'appareil. Après la réparation de l'appareil, s'assurer de redisposer les fils tel qu'ils étaient avant le démontage.
3. Faire attention à l'électricité statique des circuits intégrés et des autres circuits lors de la réparation.

ÉTAPE	DÉPOSE	PROCÉDÉ	FIGURE
1	Coffret arrière	1. Vis ..... (A)x5	4-1,2
2	Coffret avant	1. Vis ..... (B)x2	4-3,4
3	Cache-touches	1. Vis ..... (C)x1	4-5
4	PMI principale	1. Vis ..... (D)x4	4-6

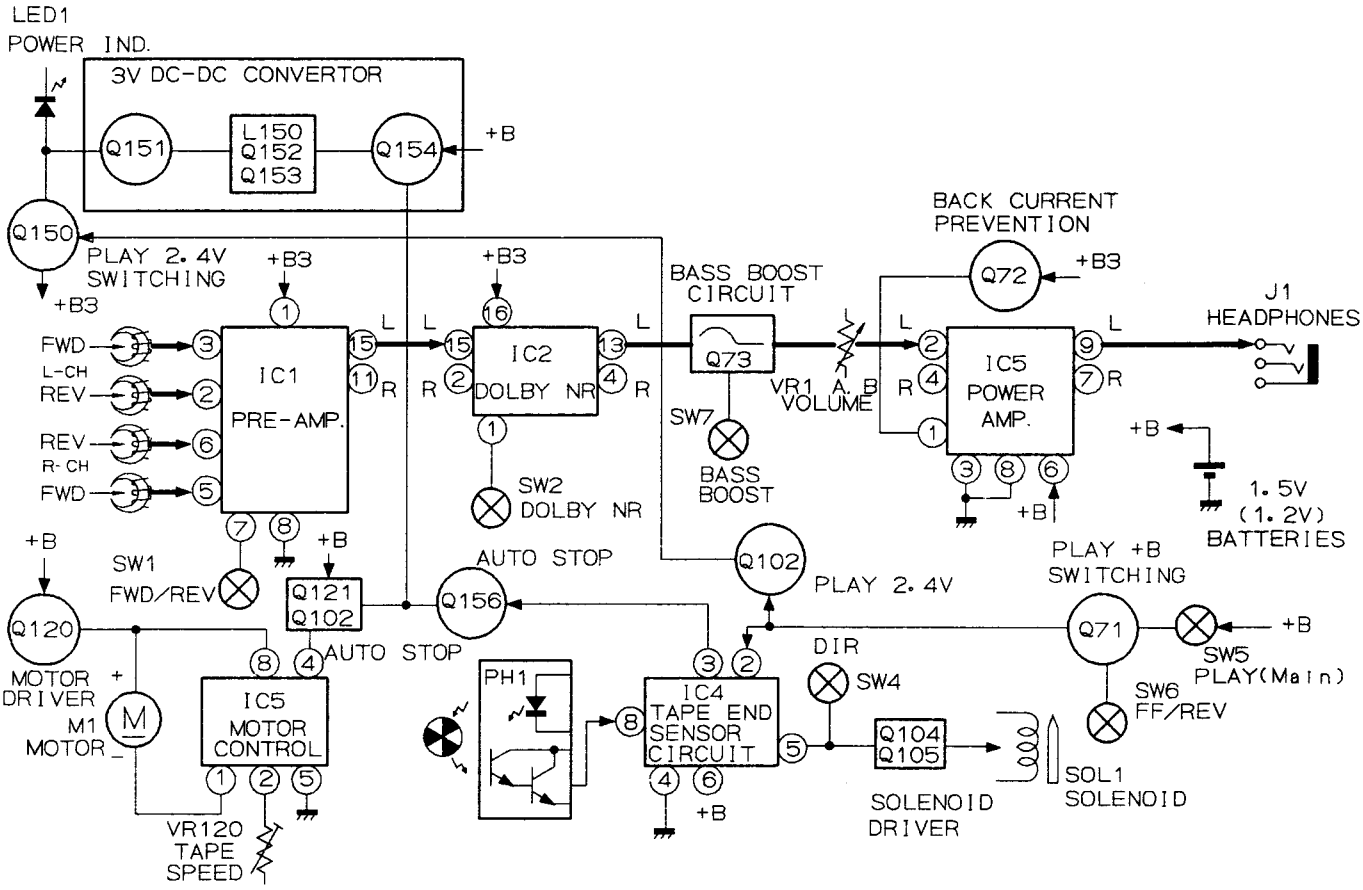

Figure 5 BLOCK DIAGRAM

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ADJUSTMENT

As for adjusting method refer to the relevant explanation in Service Manual "ADJUSTMENT PROCEDURES OF AUDIO PRODUCTS".

MECHANISM SECTION

• Driving Force check

Torque Meter	Specified value
Play: TW-2412	Over 50 g
Reverse play: TW-2422	Over 50 g

• Torque Check

Torque Meter	Specified value
Play: TW-2111	26 to 43 g.cm
Reverse play: TW-2121	26 to 43 g.cm
Fast forward: TW-2231	Over 60 g.cm
Rewind: TW-2231	Over 60 g.cm

• Head Azimuth

Test Tape	Instrument Connection
MTT-114	Headphones (Load resistance: 16 ohms)

• Tape Speed

Test Tape	Adjusting Point	Specified value	Instrument Connection
MTT-111	VR120	3,000 ± 60 Hz	Headphones (Load resistance: 16 ohms)

TAPE SECTION

Position of each switch or control	
Volume	Max
Dolby NR switch	OFF
Bass Boost switch	OFF
Tape selector switch	Normal
Reverse mode switch	⊂⊃

• Playback Amplifier Sensitivity check

Test Tape	Adjusting Point	Specified value	Instrument Connection
MTT-150	*1 if measurement is low. *2 if measurement is high.	100 mv ± 1 dB	L: Pin 13 of IC2 R: Pin 4 of IC2

*1: When output of pins 13 and 4 of IC2 is lower than specified value, connect additionally R3 and R4 (10 kohm) in parallel with R1 and R2.
*2: When output of pins 13 and 4 of IC2 is higher than specified value, connect R5 and R6 (100 ohm) in series with R1 and R2 after pattern cut.

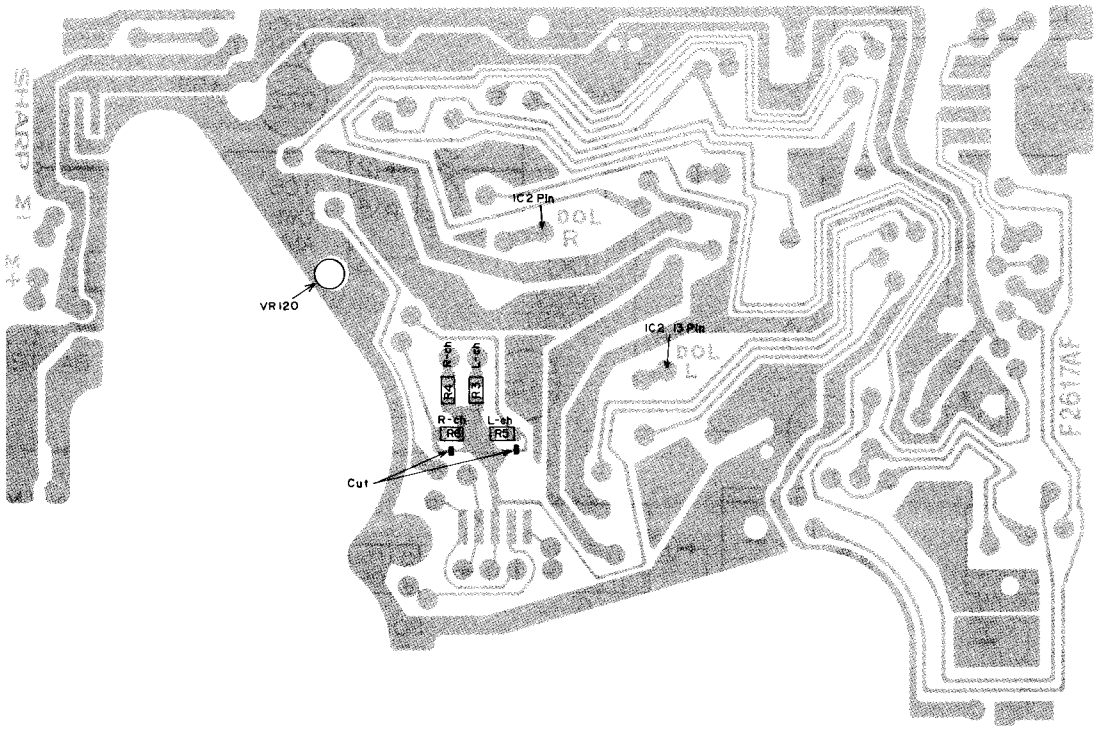


Figure 6 ADJUSTMENT POINTS

Ⓓ EINSTELLUNG

Einzelheiten über das Einstellverfahren sind in den entsprelchenden Erklärungen der Service-Anleitung "EINSTELLVERFAHREN FÜR AUDIOPRODUKTE" angegeben.

MECHANISMUS-TEIL

• Überprüfung der Antriebskraft

Drehmomentmesser	Vorgeschriebener Wert
Wiedergabe: TW-2412	Über 150 g
Rücklauf-Wiedergabe: TW-2422	Über 150 g

• Überprüfung des Drehmoments

Drehmomentmesser	Vorgeschriebener Wert
Wiedergabe: TW-2111	26 - 43 g.cm
Rücklauf-Wiedergabe: TW-2121	26 - 43 g.cm
Schnellvorlauf: TW-2231	Über 60g.cm
Rückspulung: TW-2231	Über 60g.cm

• Kopfazimut

Testband	Instrumentenanschluß
MTT-114	Kopfhörer (Belastungswiderstand: 16 Ohm)

• Bandgeschwindigkeit

Testband	Einstellpunkt	Vorgeschriebener Wert	Instrumentenanschluß
MTT-111	VR120	3 000 ± 60 Hz	Kopfhörer (Belastungswiderstand: 16 Ohm)

BAND-TEIL

Stellung jedes Schalters oder Stellers	
Lautstärke	Max
Dolby-NR-Schalter	AUS
Baßanhebungsschalter	AUS
Bandsortenwahlschalter	Normal
Rücklauf-Betriebsartenschalter	⊂⊃

• Empfindlichkeit des Wiedergabe-Verstärkers

Testband	Einstellpunkt	Vorgeschriebener Wert	Instrumentenanschluß
MTT-150	*1 wenn die Messung tief ist. *2 wenn die Messung hoch ist.	100mV ± 1 dB	L: Stift 13 von IC2 R: Stift 4 von IC2

*1: Ist der Ausgang der Stifte 13 und 4 von IC2 tiefer als der angegebene Wert, zusätzlich R3 und R4 (10 kOhm) parallel zu R1 und R2 anschließen.
*2: Ist der Ausgang der Stifte 13 und 4 von IC2 höher als der angegebene Wert, nach dem Schnitt des Musters R5 und R6 (100 Ohm) in Serie zu R1 und R2 anschließen.

Ⓕ RÉGLAGE

Pour la méthode de réglage, se reporter aux indications concernées dans le Manuel de service "PROCEDES DE REGLAGE DES PRODUITS ACOUSTIQUES".

PARTIE MECANISME

• Vérification de la force d'entraînement

Torsiomètre	Valeur spécifiée
Lecture: TW-2412	Plus de 150 g
Lecture d'inversion: TW-2422	Plus de 150 g

• Vérification du couple

Torsiomètre	Valeur spécifiée
Lecture: TW-2111	26 à 43 g.cm
Lecture d'inversion: TW-2121	26 à 43 g.cm
Avance rapide: TW-2231	Plus de 60 g.cm
Rebobinage: TW-2231	Plus de 60 g.cm

• Azimut de la tête

Bande d'essai	Instrument de connexion
MTT-114	Casque (Résistance de charge: 16 ohms)

• Vitesse de défilement

Bande d'essai	Point de réglage	Valeur spécifiée	Instrument de connexion
MTT-111	VR120	3.000 ± 60 Hz	Casque (Résistance de charge: 16 ohms)

PARTIE MAGNETOPHONE

Position de chaque commutateur ou chaque commande	
Volume	Max
Commutateur Dolby NR	OFF (arrêt)
Commutateur d'amplification des graves	OFF (arrêt)
Sélecteur de bande	Normal
Commutateur de mode d'inversion	⊂⊃

• Sensibilité de l'amplificateur de lecture

Bande d'essai	Point de réglage	Valeur spécifiée	Instrument de connexion
MTT-150	*1 Lorsque la valeur mesurée est inférieure. *2 Lorsque la valeur mesurée est supérieure.	100mV ± 1dB	L: Broche 13 de IC2 R: Broche 4 de IC2

*1: Lorsque la sortie des broches 13 et 4 de IC2 est inférieure à la valeur spécifiée, connecter en outre R3 et R4 (10 kohms) en parallèle aux R1 et R2.
*2: Lorsque la sortie des broches 13 et 4 de IC2 est supérieure à la valeur spécifiée, connecter R5 et R6 (100 ohms) en série aux R1 et R2 après la taille du modèle.

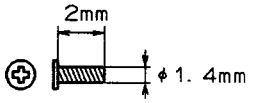
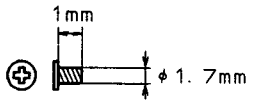
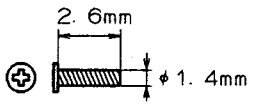
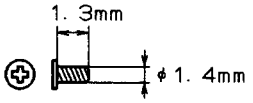
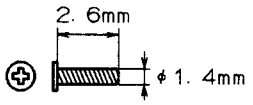
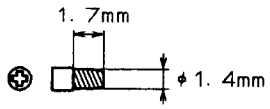
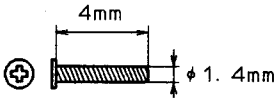
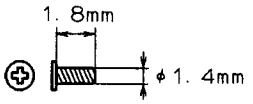
PART NO.	LX-BZ0526AFFC	LX-BZ0600AFFC	LX-BZ0607AFFF
COLOR	Silver	Silver	Black
SHAPE FORME			
PART NO.	LX-BZ0604AFFC	LX-BZ0607AFFC	LX-BZ0636AFFF
COLOR	Silver	Silver	Black
SHAPE FORME			
PART NO.	LX-BZ0637AFFF	LX-BZ0638AFFF	
COLOR	Silver	Silver	
SHAPE FORME			

Figure 8 LIST OF SCREWS USED FOR EXTERIOR

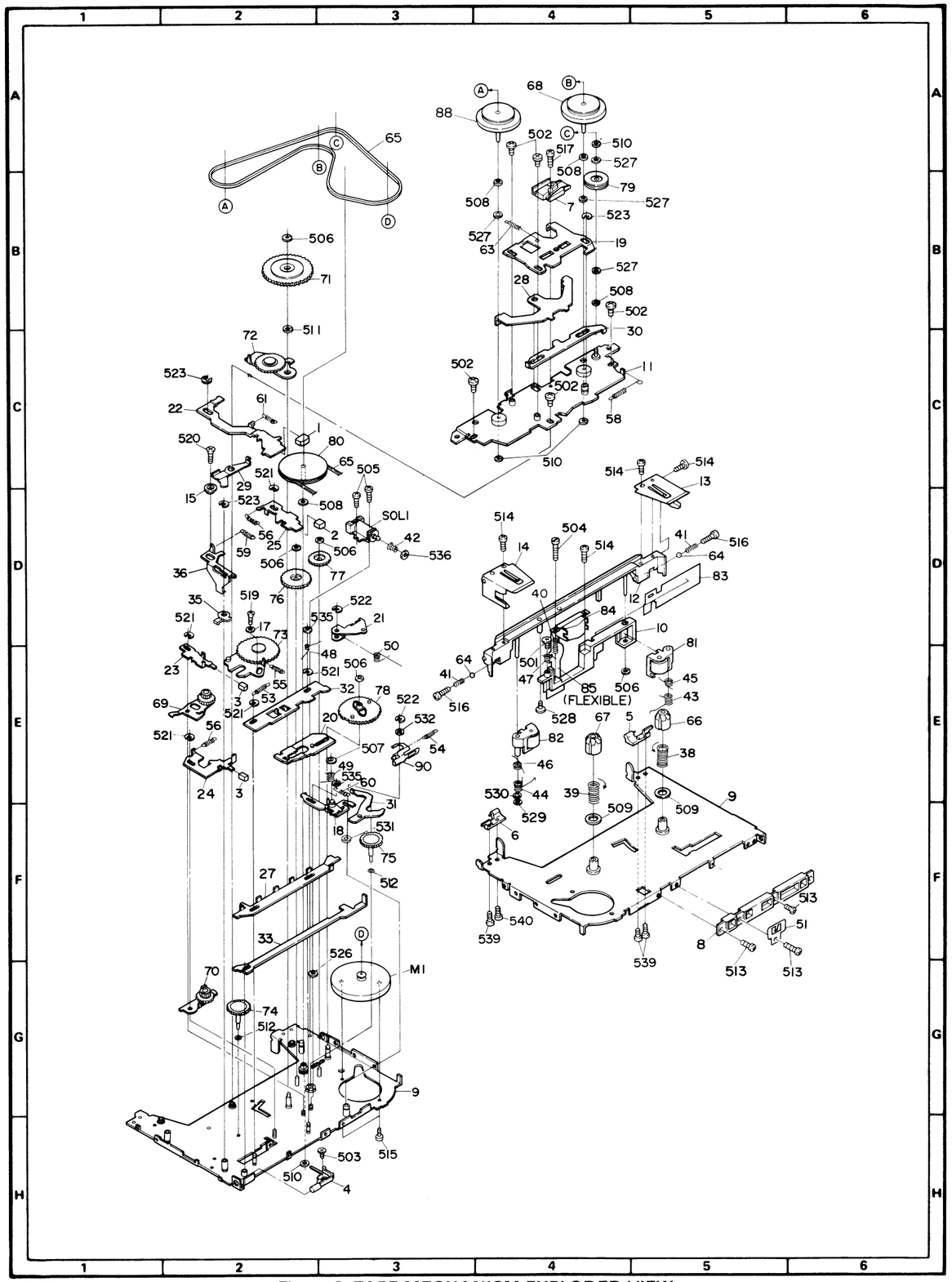


Figure 9 TAPE MECHANISM EXPLODED VIEW

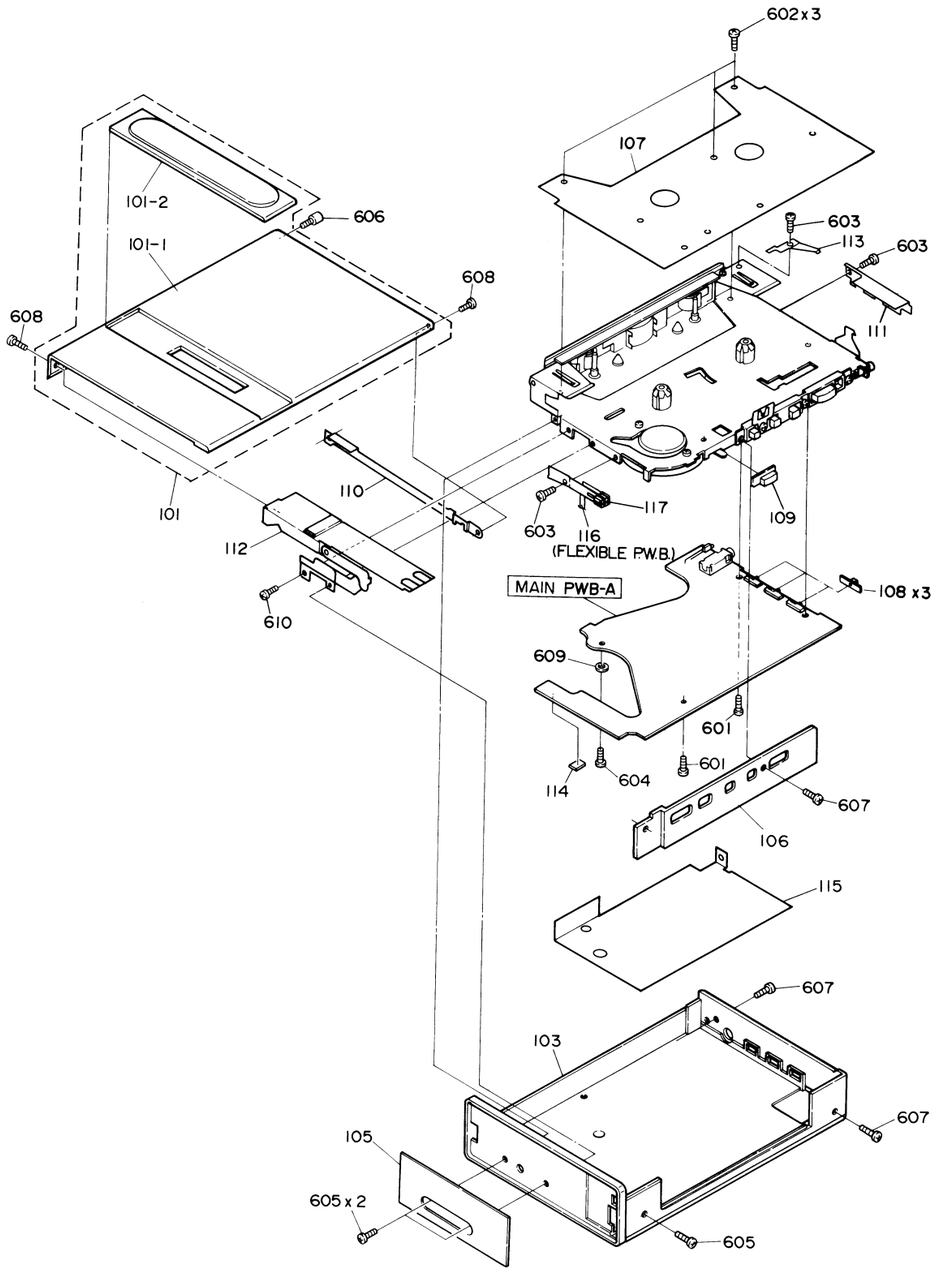
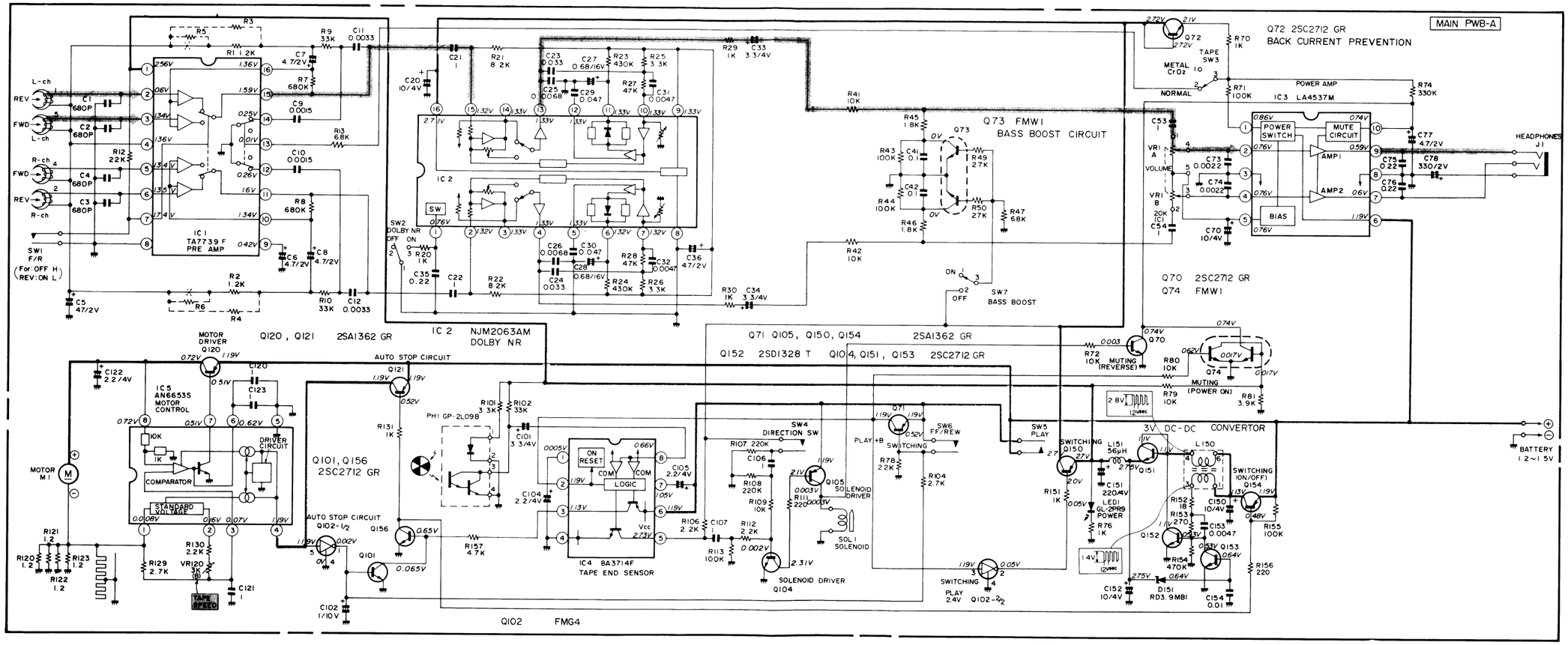


Figure 10 CABINET EXPLODED VIEW



● NOTES ON SCHEMATIC DIAGRAM can be found on page 15.

——— +B ~~~~ TAPE Playback Signal

Figure 11 SCHEMATIC DIAGRAM

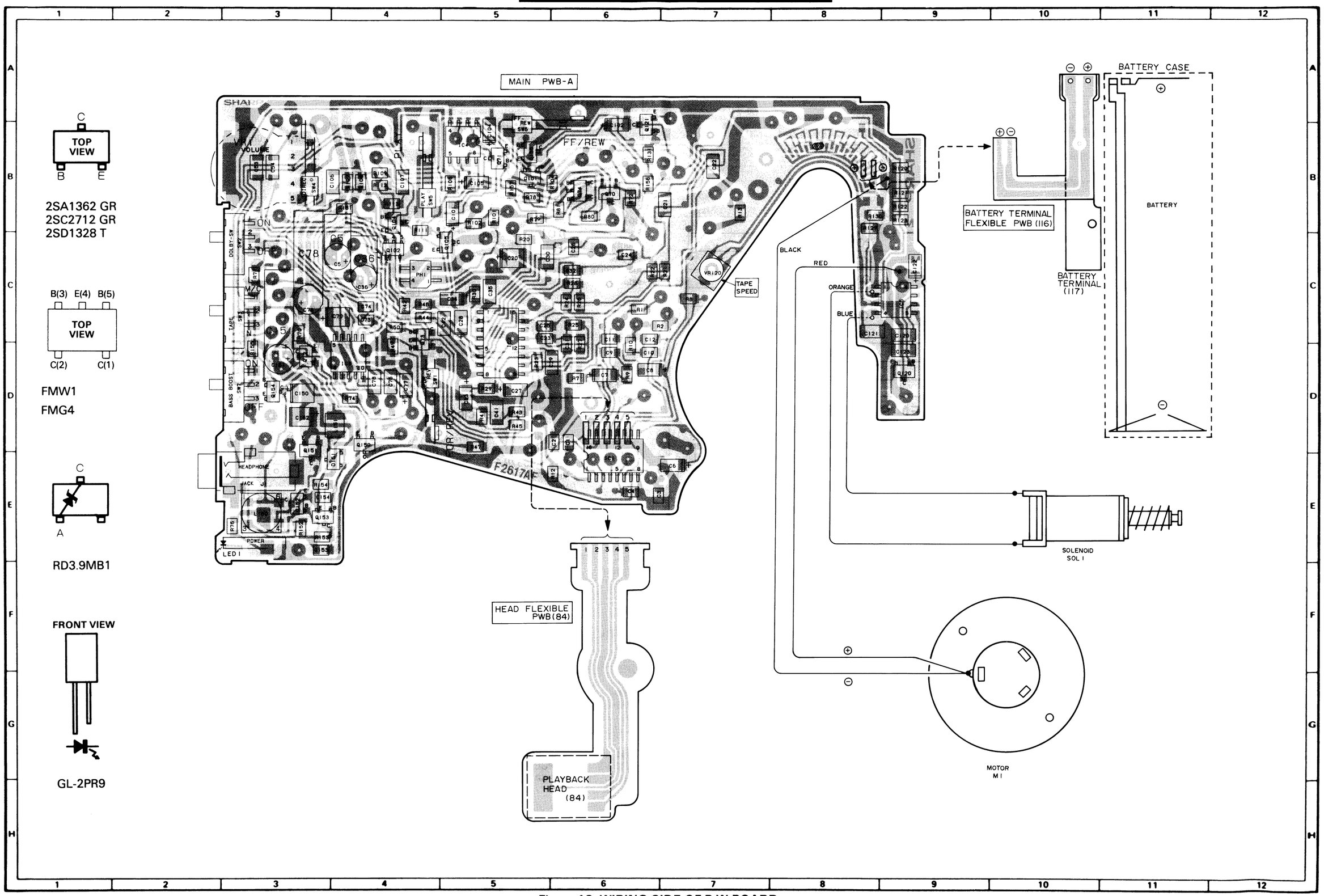


Figure 13 WIRING SIDE OF P.W.BOARD

Ⓔ NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
  (CH), (TH), (RH), (UJ): Temperature compensation
  (ML): Mylar type
  (P.P.): Polypropylene type
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.

REF. NO.	DISCRIPTION	POSITION
SW1	REVERSE MODE	⊂⊃ - ⊃
SW2	DOLBY NR	ON - OFF
SW3	TAPE	NORM - CrO_2/METAL
SW4	DIRECTION (A/B)	ON -OFF
SW5	PLAYBACK	ON - OFF
SW6	FAST(FF/REW)	ON - OFF
SW7	BASS BOOST	ON - OFF

Ⓓ ANMERKUNGEN ZUM SCHEMATISCHEN SCHALTPLAN

- Widerstände:
  Um die Einheiten der Widerstände unter-scheiden zu können, werden Symbole Wir K und M benutzt. Das Symbol K bedeutet 1000 Ohm und das Symbol M 1000 Kiloohm; Bei Widerständen ohne Symbol handelt es sich um ohmsche Widerstände.
- Kondensatoren:
  Zum Bezeichnen der Kondensatoreinheit wird das Symbol P benutzt; dieses Symbol P bedeutet Nanofard. Die Einheit eines Kondensators ohne Symbol ist Mikrofarad. Für Elektrolytkondensatoren wird die Bezeichnung "Kapazität/ Stehspannung" benutzt.
  (CH), (TH), (RH), (UJ): Temperatukompensation
  (ML): Mylarkondensator
  (P.P.): Polypropylentyp
- Die in den einzelnen Teilen angegebenen Spannungen werden mit einem Digitalvielfachmeßgerät zwischen dem betreffen den Teil und dem Chassis ohne Signalzuleitung gemessen.
- Änderungen des schematischen Schaltplans und der Verdrahtungsseite der Leiterplatte für dieses Modell im Sinne von Verbesserungen jederzeit vorbehalten.

Ⓕ REMARQUES CONCERNANT LE DIAGRAMME SCHÉMATIQUE

- Résistance:
  Pour différencier les unités de résistances, on utilise des symbole tels que K et M: le symbole K signifie 1000 ohms, le symbole M 1000 Kohms, et la résistance donnée sans symbole est une résistance de type ohm.
- Condensateur:
  Pour indiquer l'unité de condensateur, on utilise le symbole P; ce symbole P signifie micro-microfarad, et l'unité de condensateur donnée sans ce symbole est le microfarad. En ce qui concerne le condensateur électrolytique, on utilise l'expression "tension de régime/capacité".
  (CH), (TH), (RH), (UJ): Compensation de température
  (ML): Condensateur Mylar
  (P.P.): Type Polypropylène
- La tension indiquée dans chaque section est celle mesurée par un multimètre numérique entre la section en question et le châssis, en l'absence de tout signal.
- Le diagramme schématique et le côté câblage de la PMI de ce modèle sont sujets à modifications sans préavis pour l'amélioration de ce produit.

Ⓔ REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.
1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

NOTE:
Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Ⓓ ERSATZTEILLISTE

"BESTELLEN VON ERSATZTEILEN"

Um Ihren Auftrag schnell und richtig ausführen zu können, bitten wir um die folgenden Angaben.
1. MODELLNUMMER
2. REF. NR.
3. TEIL NR.
4. BESCHREIBUNG

ANMERKUNGEN:
Die Mit "⚠" bezeichneten Teile sind besonders wichtig für die Aufrechterhaltung der Sicherheit. Beim Wechseln dieser Teile sollten die vorgeschriebenen Teile immer verwendet werden, um sowohl die Sicherheit als auch die Leistung des Gerätes aufrechtzuerhalten.

Ⓕ LISTE DES PIÈCES DE RECHANGE

"COMMENT COMMANDER DES PIÈCES DE RECHANGE"

Pour voir votre commande exécutée de manière rapide et correcte, veuillez fournir les renseignements suivants.
1. NUMÉRO DU MODÈLE
2. N° DE RÉFÉRENCE
3. N° DE LA PIÈCE
4. DESCRIPTION

NOTE:
Les pièces portant la marque "⚠" sont particulièrement importantes pour le maintien de la sécurité. S'assurer de les remplacer par des pièces du numéro de pièce spécifié pour maintenir la sécurité et la performance de l'appareil.

For U.S.A. only

Contact your nearest SHARP Parts Distributor to order.

For location of SHARP Parts Distributor, please call Toll-Free; 800-447-4700
(In Hawaii and Alaska, please contact local SHARP dealer.)

INTEGRATED CIRCUITS

REF.NO.	PART NO.	DESCRIPTION	CODE
IC1	VHiTA7739F/-1	Pre Amp.,TA7739F	A H
IC2	VHiNJM2063AM1	Dolby NR,NJM2063AM	A P
IC3	VHiLA4537M/-1	Power Amp.,LA4537M	A K
IC4	VHiBA3714F/-1	Tape End Sensor,BA3714F	A H
IC5	VHiAN6653S/-1	Motor Control,AN6653S	A G

TRANSISTORS

Q70	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q71	VS2SA1362GR-1	Silicon,PNP,2SA1362 GR	A C
Q72	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q73,74	VSFMW1/////-1	Silicon,NPN,FMW1	A C
Q101	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q102	VSFMG4/////-1	Silicon,NPN,FMG4	A C
Q104	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q105	VS2SA1362GR-1	Silicon,PNP,2SA1362 GR	A C
Q120,121	VS2SA1362GR-1	Silicon,PNP,2SA1362 GR	A C
Q150	VS2SA1362GR-1	Silicon,PNP,2SA1362 GR	A C
Q151	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q152	VS2SD1328-T-1	Silicon,NPN,2SD1328 T	A B
Q153	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B
Q154	VS2SA1362GR-1	Silicon,PNP,2SA1362 GR	A C
Q156	VS2SC2712GR-1	Silicon,NPN,2SC2712 GR	A B

DIODES

D151	VHERD3R9MB1-1	Zener,3.9V,RD3.9MB1	A B
LED1	VHPGL-2PR9/-1	LED,Red,GL-2PR9	A C
PH1	VHPGP-2L09B-1	Photo-interruptor,GP-2L09 B	A G

COILS

L150	RCiLB0806AFZZ	DC 3V	A E
L151	RCiLC0139AFZZ	56 μH	A D

CONTROLS

VR1	RVR-C0111AFZZ	20 kohms (C),Volume	A G
VR120	RVR-M0718AFZZ	3 kohms (B),Semi-VR	A C

CAPACITORS

There are two types of capacitors available and they can be identified from each other by reading their Part Numbers.
- Ceramic type capacitor;
  A symbol "C" or "K" is given at the 3rd digit of its Part Number like "VCC (or K)·····J."
- Semiconductor type capacitor:
  A symbol "T" is given at the 3rd digit of its Part Number like "VCT·····J."

The capacitance error of each capacitor is indicated by the symbol given at the 13th digit of the Part Number as follows:"J" (±5%), "K" (±10%), "M" (±20%), "N" (±30%), "C" (±0.25 pF), "D" (±0.5 pF), "Z" (+80−20%).
(Tubular type ceramic capacitor is identified by the symbol TV(TQ/CY) of the part NO. VC00TV(TQ/CY)0000000; this TV(TQ/CY) does not mean the lead wire.)
(Tubular type ceramic capacitor is identified by the symbol MF(MN) of the part NO. VC00MF(MN)0000000; this MF(MN) does not mean the lead wire.)
Unless otherwise specified, electrolytic capacitors are ±20% type.

C1~4	VCKYTV1HB681K	680 pF,50V	A A
C5	RC-EZ1346AFZZ	47 μF,2V,Electrolytic	A B
C6~8	RC-SZ1033AFZZ	4.7 μF,2V,Electrolytic	A D
C9,10	VCKYTV1HB152K	0.0015 μF,50V	A A
C11,12	VCKYTV1HB332K	0.0033 μF,50V	A A
C20	RC-SZ1101AFZZ	10 μF,4V,Electrolytic	A D
C21,22	VCKYTQ1CF105Z	1 μF,16V	A C
C23,24	VCKYTV1EF333Z	0.033 μF,25V	A A
C25,26	VCKYTV1HB682M	0.0068 μF,50V	A A
C27,28	VCSATA1CJ684M	0.68 μF,16V,Tantalume, Electrolytic	A C
C29,30	VCKYTQ1ED473M	0.047 μF,25V	A B
C31,32	VCKYTV1HB472K	0.0047 μF,50V	A A
C33,34	VCSATA0GJ335M	3.3 μF,4V,Tantalume, Electrolytic	A C
C35	VCKYTQ1EF224Z	0.22 μF,25V	A B
C36	RC-EZ1346AFZZ	47 μF,2V,Electrolytic	A B

REF.NO.	PART NO.	DESCRIPTION	CODE
C41,42	VCKYTQ1ED104M	0.1 μF,25V	A C
C53,54	VCKYTQ1CF105Z	1 μF,16V	A C
C70	RC-SZ1101AFZZ	10 μF,4V,Electrolytic	A D
C73,74	VCKYTV1HB222K	0.0022 μF,50V	A A
C75,76	VCKYTQ1EF224Z	0.22 μF,25V	A B
C77	RC-SZ1033AFZZ	4.7 μF,2V,Electrolytic	A D
C78	RC-EZ1347AFZZ	330 μF,2V,Electrolytic	A C
C101	VCSATA0GJ335M	3.3 μF,4V,Tantalume, Electrolytic	A C
C102	VCSATA1AJ105M	1 μF,10V,Tantalume, Electrolytic	A D
C104,105	VCSATA0GJ225M	2.2 μF,4V,Tantalume, Electrolytic	A C
C106,107	VCKYTQ1CF105Z	1 μF,16V	A C
C120,121	VCKYTQ1CF105Z	1 μF,16V	A C
C122	VCSATA0GJ225M	2.2 μF,4V,Tantalume, Electrolytic	A C
C123	VCKYTQ1CF105Z	1 μF,16V	A C
C150	RC-SZ1101AFZZ	10 μF,4V,Electrolytic	A D
C151	RC-EZ1344AFZZ	220 μF,4V,Electrolytic	A C
C152	RC-SZ1101AFZZ	10 μF,4V,Electrolytic	A D
C153	VCKYTV1HB472K	0.0047 μF,50V	A A
C154	VCKYTV1HB103K	0.01 μF,50V	A B

RESISTORS

(Unless otherwise specified, resistors are ±5%,carbon type.) (Tubular type carbon film resistor ±5% is identified the symbol TV(TQ/CY) of the part NO. VRS−TV(TQ/CY)0000000; this TV(TQ/CY) does not mean lead wire.)

R1,2	VRS-TV2AB122J	1.2 kohms,1/10W	A A
R7,8	VRS-TV2AB684J	680 kohms,1/10W	A A
R9,10	VRS-TV2AB333J	33 kohms,1/10W	A A
R12	VRS-TV2AB223J	22 kohms,1/10W	A A
R13	VRS-TV2AB682J	6.8 kohms,1/10W	A A
R20	VRS-TV2AB102J	1 kohm,1/10W	A A
R21,22	VRS-TV2AB822J	8.2 kohms,1/10W	A A
R23,24	VRS-TV2AB434J	430 kohms,1/10W	A A
R25,26	VRS-TV2AB332J	3.3 kohms,1/10W	A A
R27,28	VRS-TV2AB473J	47 kohms,1/10W	A A
R29,30	VRS-TV2AB102J	1 kohm,1/10W	A A
R41,42	VRS-TV2AB103J	10 kohm,1/10W	A A
R43,44	VRS-TV2AB104J	100 kohm,1/10W	A A
R45,46	VRS-TV2AB182J	1.8 kohms,1/10W	A A
R47	VRS-TV2AB683J	68 kohms,1/10W	A A
R49,50	VRS-TV2AB273J	27 kohms,1/10W	A A
R70	VRS-TV2AB102J	1 kohm,1/10W	A A
R71	VRS-TV2AB104J	100 kohm,1/10W	A A
R72	VRS-TV2AB103J	10 kohm,1/10W	A A
R74	VRS-TV2AB334J	330 kohms,1/10W	A A
R76	VRS-TV2AB102J	1 kohm,1/10W	A A
R78	VRS-TV2AB222J	2.2 kohms,1/10W	A A
R79,80	VRS-TV2AB103J	10 kohm,1/10W	A A
R81	VRS-TV2AB392J	3.9 kohms,1/10W	A A
R101	VRS-TV2AB332J	3.3 kohms,1/10W	A A
R102	VRS-TV2AB333J	33 kohms,1/10W	A A
R104	VRS-TV2AB272J	2.7 kohms,1/10W	A A
R106	VRS-TV2AB222J	2.2 kohms,1/10W	A A
R107,108	VRS-TV2AB224J	220 kohms,1/10W	A A
R109	VRS-TV2AB103J	10 kohm,1/10W	A A
R111	VRS-TV2AB221J	220 ohms,1/10W	A A
R112	VRS-TV2AB222J	2.2 kohms,1/10W	A A
R113	VRS-TV2AB104J	100 kohm,1/10W	A A
R120～123	VRS-TV2AB1R2K	1.2 ohms,1/10W,±10%	A A
R129	VRS-TV2AB272J	2.7 kohms,1/10W	A A
R130	VRS-TV2AB222J	2.2 kohms,1/10W	A A
R131	VRS-TV2AB102J	1 kohm,1/10W	A A
R151	VRS-TV2AB102J	1 kohm,1/10W	A A
R152	VRS-TV2AB180J	18 ohms,1/10W	A A
R153	VRS-TV2AB271J	270 ohms,1/10W	A A
R154	VRS-TV2AB474J	470 kohms,1/10W	A A
R155	VRS-TV2AB104J	100 kohm,1/10W	A A
R156	VRS-TV2AB221J	220 ohms,1/10W	A A
R157	VRS-TV2AB472J	4.7 kohms,1/10W	A A

OTHER CIRCUITRY PARTS

J1	QJAKM0050AFZZ	Jack,Headphones	A D
M1	RMŌTV0335AFZZ	Motor,with Pully	A Z
SOL1	RPLU-0203AFZZ	Solenoid	A K
SW1	QSW-F0222AFZZ	Switch,Leaf Type	A C
SW2,3	QSW-S0543AFZZ	Switch,Slide Type	A D
SW4～6	QSW-F0222AFZZ	Switch,Leaf Type	A C
SW7	QSW-S0543AFZZ	Switch,Slide Type	A D

MECHANICAL PARTS

1	JKNBM0794AFSA	Button,Playback	A B
2	JKNBM0795AFSA	Button,Stop	A B
3	JKNBM0796AFSA	Button,FF/REW	A B
4	JKNBZ0705AFSA	Button,Direction	A B
5	LANGF1040AFZZ	Bracket,Back Chassis,Left	A D
6	LANGF1041AFZZ	Bracket,Back Chassis, Right	A D
7	LANGG0154AFZZ	Guide,Flexible PWB	A B
8	LANGG0155AFZZ	Guide,Button	A B
9	LCHSM0668AFZZ	Main Chassis	—
10	LCHSS0241AF01	Sub Chassis	A H
11	LCHSS0240AFZZ	Second Chassis	A K
12	LCHSZ0235AF01	Back Chassis	A M
13	LHLDX3077AFZZ	Cassette Holder,Left	A B
14	LHLDX3078AFZZ	Cassette Holder,Right	A B
15	LSLVM0256AFFW	Sleeve,Cassette Holder Lock Lever	A B
17	LSLVM0204AFFW	Sleeve,Lever	A B
18	MLEVF1938AFZZ	Lever,Auto Stop	A C
19	MLEVF2016AFZZ	Lever,Sub Chassis	A B
20	MLEVF1940AFZZ	Lever,Cam	A B
21	MLEVF1941AFZZ	Lever,Solenoid	A C
22	MLEVF1942AFZZ	Lever,Play	A A
23	MLEVF1943AFZZ	Lever,Fast Forward	A B
24	MLEVF1944AFZZ	Lever,Rewind	A A
25	MLEVF1945AFZZ	Lever,Stop	A A
27	MLEVF2078AFZZ	Lock Plate	A B
28	MLEVF2017AFZZ	Lever, Pinch Roller	A B
29	MLEVF1949AFZZ	Lever,Play Connecting	A A
30	MLEVF2018AFZZ	Lever,Reverse Selector	A A
31	MLEVF1951AFZZ	Lever,Play Operation	A A
32	MLEVF1952AFZZ	Lever,Switch	A C
33	MLEVF1953AFZZ	Lever,Mode Selector	A B
35	MLEVF1955AFZZ	Lever,Eject	A A
36	MLEVF1956AFZZ	Lever,Cassette Holder Lock	A C
37	MLEVF1962AFZZ	Lever,Eject Prevention	A B
38	MSPRC0653AFFJ	Spring,Back Tension (Left)	A A
39	MSPRC0654AFFJ	Spring,Back Tension (Right)	A A
40	MSPRC0638AFFJ	Spring,Azimuth Adj.	A A
41	MSPRC0639AFFJ	Spring,Back Chassis	A A
42	MSPRC0640AFFJ	Spring,Solenoid	A A
43	MSPRD0862AFFJ	Spring,Pinch Roller,Left	A A
44	MSPRD0863AFFJ	Spring,Pinch Roller,Right	A A
45	MSPRD0795AFFJ	Spring,Pinch Roller Return, Left	A A
46	MSPRD0796AFFJ	Spring,Pinch Roller Return, Right	A A
47	MSPRD0797AFFJ	Spring,Sub Chassis	A A
48	MSPRD0798AFFJ	Spring,Fast	A A
49	MSPRD0799AFFJ	Spring,Auto Stop	A A
50	MSPRD0800AFFJ	Spring,Solenoid	A A

REF.NO.	PART NO.	DESCRIPTION	CODE
51	MSPRP0468AFFJ	Spring,Cassette Press	A B
53	MSPRT1247AFFJ	Spring,Switch	A A
54	MSPRT1248AFFJ	Spring,Lock Plate	A A
55	MSPRT1250AFFJ	Spring,Senter Gear	A A
56	MSPRT1251AFFJ	Spring,Rewind Gear	A A
58	MSPRT1253AFFJ	Spring,Play Gear	A A
59	MSPRT1254AFFJ	Spring,Cassette Holder Lock	A A
60	MSPRT1255AFFJ	Spring,Auto Return	A A
61	MSPRT1256AFFJ	Spring,Play Lever	A A
63	MSPRT1301AFFJ	Spring,Sub	A A
64	NBALS0056AFZZ	Steel Ball,ϕ1.5mm	A A
65	NBLTK0379AFZZ	Belt,Drive	A B
66	NDAiR0209AFZZ	Cap,Supply Reel	A A
67	NDAiR0210AFZZ	Cap,Take-up Reel	A B
68	NFLYC0148AFZZ	Flywheel (FWD)	A E
69	NGERH0212AFZZ	Gear,Fast Forward	A D
70	NGERH0213AFZZ	Gear,Rewind	A D
71	NGERH0214AFZZ	Gear,Slip	A D
72	NGERH0215AFZZ	Gear,Play	A D
73	NGERH0216AFZZ	Gear,Senter	A D
74	NGERH0217AFZZ	Gear,Reel,Left	A B
75	NGERH0218AFZZ	Gear,Reel,Right	A A
76	NGERH0219AFZZ	Gear,Drive	A A
77	NGERH0220AFZZ	Gear,Cam Drive	A A
78	NGERH0221AFZZ	Gear,Cam	A B
79	NPLYR0127AFZZ	Center Pulley	A A
80	NPLYR0128AFZZ	Pulley,Drive	A F
81	NRōLY0084AFZZ	Pinch Roller,Left	A D
82	NRōLY0085AFZZ	Pinch Roller,Right	A D
83	PSHEP0118AFZZ	Sheet	A B
84	RHEDF0105AF01	Head,Play	A T
85	QPWBH0060AFZZ	Head PWB	A E
88	NFLYC0149AFZZ	Flywheel (REV)	A E
90	MLEVF2079AFZZ	Lever,Reverse Mode	A A
501	LX-BZ0511AFZZ	Screw,ϕ1.4×2.5mm	A A
502	LX-BZ0608AFZZ	Screw,ϕ1.4×1.4mm	A A
503	LX-BZ0601AFZZ	Screw,ϕ1.4×1.2mm	A A
504	LX-BZ0602AFZZ	Screw, Azumuth, Adj.	A A
505	LX-BZ0605AFZZ	Screw,ϕ1.4×1.5mm	A A
506	LX-WZ1064AFZZ	Washer,ϕ1.2×ϕ3.2×0.25mm	A A
507	LX-WZ9064AFZZ	Washer,ϕ1.5×ϕ3.8×0.5mm	A A
508	LX-WZ1129AFZZ	Washer,ϕ1.3×ϕ2.6×0.25mm	A A
509	LX-WZ1131AFZZ	Washer,ϕ3.6×ϕ6×0.25mm	A A
510	LX-WZ1155AFZZ	Washer,ϕ1×ϕ2.4×0.25mm	A A
511	LX-WZ1134AFZZ	Washer,ϕ1.7×ϕ3.2×0.25mm	A A
512	LX-WZ9082AFZZ	Washer,ϕ2.1×ϕ3.5×0.25mm	A A
513	XAPSF14P01600	Screw,ϕ1.4×1.6mm	A A
514	XAPSN14P02200	Screw,ϕ1.4×2.2mm	A A
515	XAPSN17P01400	Screw,ϕ1.7×1.4mm	A A
516	XAPSN20P02000	Screw,ϕ2×2mm	A A
517	XASSN14P02800	Screw,ϕ1.4×2.8mm	A A
519	XASSN14P01800	Screw,ϕ1.4×1.8mm	A A
520	XASSN17P01800	Screw,ϕ1.7×1.8mm	A A
521	XREUJ12-03000	Stop Ring,E-Type,ϕ1.2×0.3mm	A A
522	XREUJ15-04000	Stop Ring,E-Type,ϕ1.5×0.4mm	A A
523	XREUJ20-04000	Stop Ring,E-Type,ϕ2×0.4mm	A A
526	LX-WZ3096AFZZ	Washer,ϕ2.1×ϕ4×0.2mm	A A
527	LX-WZ9109AFZZ	Washer,ϕ1.2×ϕ2.2×0.1mm	A A
528	LX-BZ0562AFZZ	Screw,ϕ1.4×1.8mm	A A
529	LX-WZ1136AFZZ	Washer,ϕ1.2×ϕ4×0.25mm	A A
530	LSLVM0230AFFW	Sleeve,Pinch Roller	A A
531	LX-WZ1137AFZZ	Washer,ϕ3.1×ϕ4.7×0.15mm	A A
532	LX-WZ3098AFZZ	Washer,ϕ2.1×ϕ4×0.1mm	A A
535	LX-WZ9100AFZZ	Washer,ϕ1.2×ϕ3.2×0.25mm	A A
536	LX-WZ1121AFZZ	Washer,ϕ2.1×ϕ5×0.2mm	A A
539	XASSF14P03000	Screw,ϕ1.4×3mm	A A
540	XSSSF14P03500	Screw,ϕ1.4×3.5mm	A A

CABINET PARTS

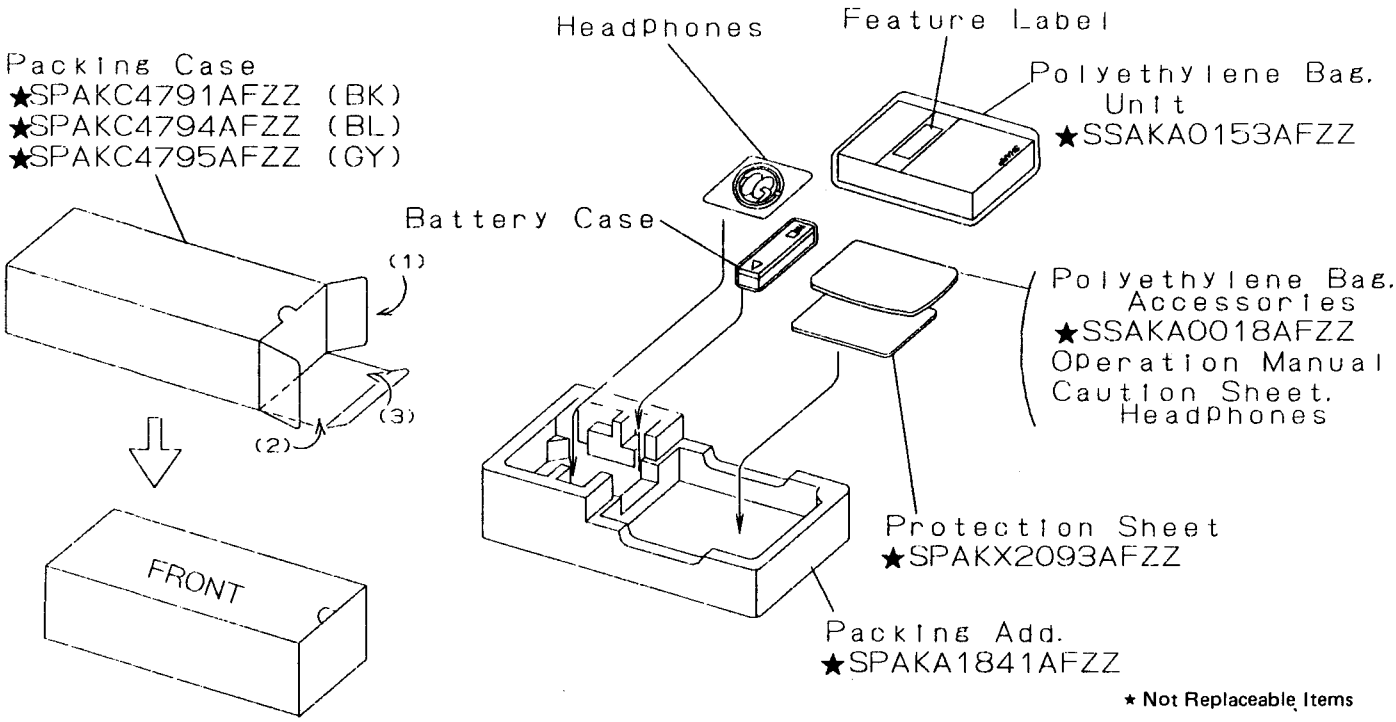
101	GCAB-1623AFSA	Front Cabinet Ass'y, (BK)	A S
101	GCAB-1623AFSB	Front Cabinet Ass'y, (GY), For USA	A S
101	GCAB-1623AFSC	Front Cabinet Ass'y, (BL), For USA	A S
101	GCAB-1623AFSD	Front Cabinet Ass'y, (R), For UK	A S
101-1	————	Front Cabinet	—
101-2	HPNLH1211AFSA	Window,Cassette	A G
103	GCAB-1672AFSA	Rear Cabinet, (BK)	A S
103	GCAB-1672AFSB	Rear Cabinet, (GY), For USA	A S
103	GCAB-1672AFSC	Rear Cabinet, (BL), For USA	A S
103	GCAB-1672AFSD	Rear Cabinet, (R), For UK	A S
105	HiNDP2024AFSA	Label,Specifications,(BK), For USA and UK	A B
105	HiNDP2025AFSA	Label,Specifications,(BK), For Other than USA and UK	A B
105	HiNDP2026AFSA	Label,Specifications,(BL), For USA and UK	A B
105	HiNDP2027AFSA	Label,Specifications,(R), For Other than USA and UK	A B
105	HiNDP2028AFSA	Label,Specifications,(R), For UK	A B
105	HiNDP2029AFSA	Label,Specifications,(GY), For USA	A B
106	GCōVA1772AFSA	Cover,Button	A E
107	HDECB0402AFSA	Decoration Plate, Mechanism	A E
108	JKNBM0791AFSA	Knob,Slide	A A
109	JKNBM0792AFSA	Knob,Reverse	A B
110	LANGT1580AFZZ	Bracket,Lock	A C
111	LRALM0074AFZZ	Rail,Knob	A B
112	MLNKM0075AFZZ	Arm Ass'y,Open/Close	A H
113	MSPRP0501AFFW	Spring,Cassette Up	A B
114	PSHET0078AFZZ	Felt,Solenoid	A A
115	PSHET0098AFZZ	Shield Paper	A C
116	QPWBH0116AFZZ	Flexible PWB,Battery Terminal	A D
117	QTANZ0271AFZZ	Battery Terminal	A H
601	LX-BZ0526AFFC	Screw,ϕ1.4×2.0mm	A A
602	LX-BZ0600AFFC	Screw,ϕ1.7×1mm	A A
603	LX-BZ0604AFFC	Screw,ϕ1.4×1.3mm,Silver	A A
604	LX-BZ0607AFFC	Screw,ϕ1.4×2.6mm,Silver	A A
605	LX-BZ0607AFFF	Screw,ϕ1.4×2.6mm,Black	A A
606	LX-BZ0636AFFF	Screw,ϕ1.4×1.7mm	A B
607	LX-BZ0637AFFF	Screw,ϕ1.4×4mm	A A
608	LX-BZ0638AFFF	Screw,ϕ1.4×1.8mm	A A
609	XWSSD14-05000	Washer,ϕ1.4×0.5mm	A A
610	LX-BZ0604AFFF	Screw,ϕ1.4×2.6mm	A A

ACCESSORIES/PACKING PARTS

SPAKA1841AFZZ	Packing Add., For Other than USA	A C
SPAKC4718AFZZ	Packing Case (BK),For Other than USA	A F
SPAKC4719AFZZ	Packing Case (BL),For Other than USA	A F
SPAKC4720AFZZ	Packing Case (R),For Other than USA	A F

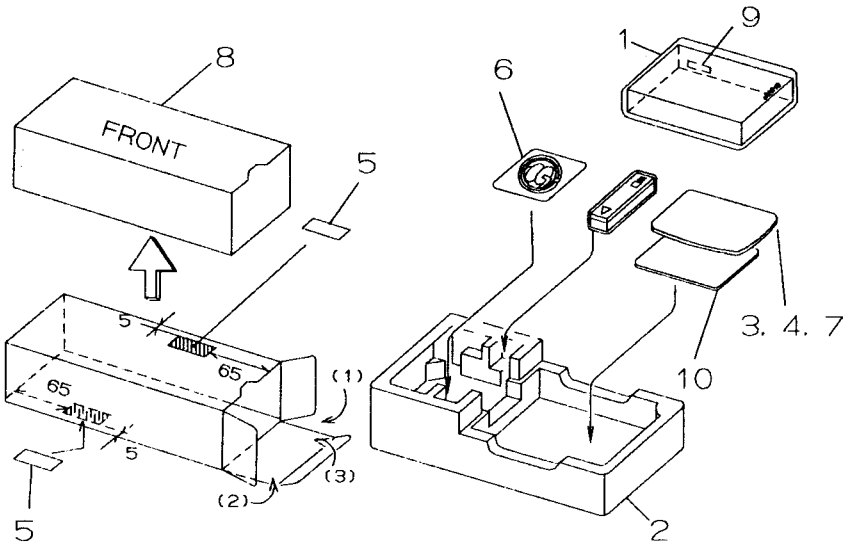
REF.NO.	PART NO.	DESCRIPTION	CODE
	SPAKX2093AFZZ	Protection Sheet, For Other than USA	A B
	SSAKA0018AFZZ	Polyethylene Bag, Accessories, For Other than USA	A A
	SSAKA0153AFZZ	Polyethylene Bag, Unit, For Other than USA	A A
	TCAUH0341AFZZ	Caution Sheet,For USA	A D
	TGANE1117AFZZ	Warranty Card,For UK	A B
	TiNSE1391AFZZ	Operation Manual,For USA	A E
	TiNSL0251AFZZ	Operation Manual,For Other than USA	A N
	TLABJ0006AFZZ	Label,MADE IN JAPAN,For UK	A A
	TLABZ0290AFZZ	Label,Color Display(BK), For UK	A B
	TLABZ0291AFZZ	Label,Color Display(BL), For UK	A B
	TLABZ1259AFZZ	Feature Label,For USA	A C
	RPHōH0105AFSA	Headphones,For Other than USA	A X
	RPHōH0110AFZZ	Headphones,For USA	A Y
	GCōVH9103AFSA	Ear Pad	A C
	GCASP0074AFSA	Case,Battery (SUM-3)	A N
	P.W.B. ASSEMBLY (Not Replacement Item)		
PWB-A	DKEND0769AF01	Main	—

PACKING OF THE SET (USA ONLY)



★ Not Replaceable Items

PACKING METHOD (UK ONLY)



1.	Polyethylene Bag, Unit	SSAKA0153AFZZ
2.	Packing Add.	SPAKA1841AFZZ
3.	Operation Manual	TiNSL0251AFZZ
4.	Warranty Card	TGANE1117AFZZ
5.	Color Display Label,(BK)	TLABZ0290AFZZ
6.	Headphones	RPHōH0105AFZZ
7.	Polyethylene Bag, Accessories	SSAKA0018AFZZ
8.	Packing Case,(BK)	SPAKC4718AFZZ
	Packing Case,(R)	SPAKC4720AFZZ
9.	Label, MADE IN JAPAN	TLABJ0006AFZZ
10.	Protection Sheet	SPAKX2093AFZZ

SHARP CORPORATION

SHARP ELECTRONICS CORPORATION

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A8712-13104H · KJ · J

Printed in Japan
In Japan gedruckt
Imprimé au Japon

Writer and Editor: Quality & Reliability Control Center of Audio Systems Group, Sharp Corp.

SG · SS · SK · SC